

AMENDMENTS TO THE CLAIMS:

1-17. (Canceled)

18. (Currently amended) An image display apparatus providing an enhanced impression of an optical perspective, said apparatus comprising:

at least one micro lens array assembly, each comprising at least one micro convex lens board having two lens array halves mounted substantially parallel to each other, each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on each flat surface thereof comprising a plurality of convex micro lenses arranged in at least one convex micro lenses matrix and said lens array halves being aligned appropriately in said micro lens array to thereby form a lens system for each said micro convex lens in each said matrix of convex lenses; and

for each said at least one micro lens array assembly, a display located relative to said micro lens array assembly to project a two-dimensional image through said micro lens array assembly to be focused in a space on an opposite side thereof as an imaging plane, each said at least one micro lens array assembly configured to create an imaging plane displaying an erect real image of the two-dimensional image at a same magnification,

wherein a shape of said imaging plane relative to a viewer provides an enhanced three-dimensional impression of said two-dimensional image by providing an illusion of depth in the displayed real image that is consistent with a three-dimensional object.

19. (Currently amended) The apparatus of claim 18, wherein each said micro lens array assembly comprises a micro convex lens board having two lens array halves, each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on

~~each flat surface thereof a magnification of said erect image is approximately unity.~~

20. (Currently amended) The apparatus of claim 19 18, wherein said shape of said imaging plane providing said enhanced three-dimensional impression is caused by at least one of:

locating said least one micro lens array assembly relative to said display in an inclined orientation consistent with a perspective effect if a viewer were viewing said three-dimensional object; and

providing a gradual change of curvature of said convex lenses on at least one said flat surface of at least one of said two lens array halves, thereby causing said imaging plane to bend in space consistent with said perspective effect of said three-dimensional object.

21. (Currently amended) The apparatus of claim 20, further comprising wherein said at least one micro lens array assembly comprises a plurality of micro lens array assemblies that together provide for a composite image presentation, each said micro lens array assembly having with a corresponding display, wherein each said micro lens array assembly and its corresponding display separately contributes to an enhanced three-dimensional impression for an overall image, thereby providing a said composite image having- wherein there are different components of which each contributes to said enhanced third three-dimensional impressions impression.

22. (Previously presented) The apparatus of claim 18, wherein said imaging plane is flat.

23. (Previously presented) The apparatus of claim 18, wherein said imaging plane is curved.

24. (Currently amended) A method of providing an enhanced three-dimensional impression of a two-dimensional image, said method comprising:

providing a micro lens array assembly comprising a plurality of convex micro lenses arranged in at least one matrix, said micro lens array assembly comprising at least one micro convex lens board having two lens array halves mounted substantially parallel to each other, each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on each flat surface thereof and appropriately aligned to thereby form a lens system; and

projecting a two-dimensional image through said micro lens array assembly to be focused on an opposite side as an imaging plane, said imaging plane being a set of points in a space where said two-dimensional image is focused by said plurality of micro lenses in said at least one matrix,

wherein said enhanced third-dimensional impression results from a shape of said imaging plane in space consistent with a perspective view of a three-dimensional object and said shape is caused by at least one of:

locating said at least one micro lens array assembly relative to said display in an inclined orientation that is consistent with said three-dimensional perspective; and

providing a gradual change of curvature of said convex lenses so that said imaging plane shape is consistent with said three-dimensional perspective in at least one said matrix of convex micro lenses, and

wherein said micro lens array assembly is configured to create an imaging plane displaying displays an erect real image of the two-dimensional image at a same magnification.

25. (Currently amended) An image display apparatus, comprising:

a display for displaying a two-dimensional image; and

a micro lens array spaced apart from the display for creating an imaging plane in a space opposite the display, the micro lens array being an upright image optical system having a same magnification, the micro lens array being not parallel to the display, said micro lens array assembly comprising at least one micro convex lens board having two lens array halves mounted substantially parallel to each other, each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on each flat surface thereof and said lens array halves are aligned appropriately in said micro lens array to thereby form a lens system for each said micro convex lens in each said matrix.

26. (Currently amended) The image display apparatus according to claim 25, wherein the micro lens array includes a plurality of identical convex micro lenses a plurality of said displays and said micro lens arrays together provides a composite image.

27. (Currently amended) The image display apparatus according to claim 25, wherein the micro lens array includes a plurality of paired convex lens halves arranged two-dimensionally, and each said paired convex lens halves are coaxial with each other so that a single optical axis is defined by each said paired convex lens halves has a magnification of approximately unity.

28. (Previously presented) The image display apparatus according to claim 25, wherein the micro lens array is flat and the display partly bends relative to the micro lens array.

29. (Previously presented) The image display apparatus according to claim 25, wherein the display is positioned within a focal depth of said micro lens array.

30. (Currently amended) An image display apparatus comprising:

a display for displaying a two-dimensional image; and
a plurality of micro lens arrays spaced apart from the display such that each said micro lens array extends at a non-right angle with respect to the display and creates an erect real image of part of the two-dimensional image at a same magnification in a space opposite the display, each said micro lens array comprising at least one micro convex lens board having two lens array halves mounted substantially parallel to each other, each said lens array half comprising a transparent flat plate with a plurality of convex lenses arranged in a matrix on each flat surface thereof and said lens array halves are aligned appropriately in said micro lens array to thereby form a lens system for each said micro convex lens in each said matrix.

31. (Currently amended) The image display apparatus according to claim 30, wherein said display has a plurality of sections which correspond to the plurality of micro lens arrays, respectively, and each of the plurality of sections displays different images or substantially different portions of a composite image.

32. (Previously presented) The image display apparatus according to claim 30, wherein the display is positioned within a focal depth of each said micro lens array.

33. (Previously presented) The image display apparatus according to claim 30, wherein an imaging plane resulting from said plurality of micro lens arrays has a flat shape and inclines toward said micro lens array.

34. (Previously presented) The image display apparatus according to claim 30, wherein an imaging plane resulting from said plurality of micro lens arrays has a curved shape and inclines toward each said micro lens array.

35. (Previously presented) The image display apparatus according to claim 32, wherein distances between said plurality of sections of the display and the corresponding plurality of micro lens arrays are equal to each other.